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10/552,085	10/04/2005	Matthias Fehr	EIS-1097/500593.20090	4150
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REED SMITH, LLP				
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EXAMINER				
LU, ZHIYU				
ART UNIT		PAPER NUMBER		
2618				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/552,085

**Applicant(s)**

FEHR ET AL.

**Examiner**

ZHIYU LU

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/2008 has been entered.

***Response to Arguments***

2. Applicant's arguments, see REMARKS, filed 12/17/2008, with respect to the rejection(s) of claim(s) 28-36 under 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of AAPA, Courtney et al., and Anzai et al.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 37 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 37 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the

reply filed 10/04/2005. In that paper, applicant has stated that it is possible to tune transmitter or receiver with the use of circulators/HF isolators, and this statement indicates that the invention is different from what is defined in the claim(s) because:

In claim 37, applicant claimed "the circulator or the HF isolator are able to be tuned so as to tune it to a given frequency range or frequency response". However, the filed specification does not disclose the circulator or the HF isolator being tunable. But it discloses that the transmitter or receiver being tunable by replacing desired circulator or HF isolator.

For examination purpose, the Examiner takes the interpretation of the filed specification.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 28, 30-35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA, citation refers to published specification) in view of Courtney et al. (US Patent#6469658) and Anzai et al. (US Patent#5793331).

Regarding claim 28, AAPA teaches a wireless microphone system comprising:

at least one antenna unit having an antenna and a circulator or an HF isolator being connected to the antenna (paragraph 0008).

But, AAPA does not expressly disclose said antenna and said circulator or said HF isolator being arranged in a common housing of the antenna unit; and wherein the antenna unit can be plugged in or screwed on such that the antenna unit is replaceable as a unit.

Courtney et al. teach in a RF transmitter where said antenna (36 of Fig. 2) and said circulator (24 of Fig. 2) being arranged as interchangeable components (Fig. 2, column 7 lines 20-29).

AAPA and Courtney et al. disclose the claimed invention except for said antenna and said circulator being arranged in a common housing of the antenna unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to put said antenna and said circulator into a common housing for replacement, since it has been held that forming in one piece an article which has formally been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Anzai et al. teach antenna unit can be screwed on such that the antenna unit is replaceable as a unit (column 1 lines 55-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate replacing antenna unit by screwing process taught by Anzai et al. into the wireless microphone system of AAPA and Courtney et al., in order replace antenna unit.

Regarding claim 30, AAPA and Courtney et al. teach a pocket transmitter microphone as explained in response to claim 28 above.

Regarding claim 31, AAPA and Courtney et al. teach a hand transmitter microphone as explained in response to claim 28 above.

Regarding claim 33, AAPA and Courtney et al. teach a wireless microphone device as explained in response to claim 28 above.

Regarding claim 35, AAPA and Courtney et al. teach a HF transmitter as explained in response to claim 28 above.

Regarding claims 32 and 34, AAPA and Courtney et al. teach the limitations of claims 28 and 33.

Courtney et al. teach wherein the antenna unit is tuned to a given frequency range (column 7 lines 22-24).

Regarding claim 37, AAPA and Courtney et al. teach the limitation of claim 28.

Courtney et al. teach wherein the circulator or the HF isolator are able to be tuned so as tune it to a given frequency range or frequency response (column 7 lines 22-24).

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA, citations refer to published specification) in view of

Courtney et al. (US Patent#6469658), Anzai et al. (US Patent#5793331), and Kawasaki et al. (US2002/0197957).

Regarding claim 29, AAPA, Courtney et al., and Anzai et al. teach the limitation of claim 28. AAPA, Courtney et al., and Anzai et al. teach a hand transmitter microphone or a pocket transmitter microphone, wherein at least one antenna unit is plugged in or screwed on to the hand transmitter microphone or the pocket transmitter microphone (paragraph 0008).

But, AAPA, Courtney et al., and Anzai et al. do not expressly disclose further comprising a receiver, and wherein at least one antenna unit is plugged in or screwed on to the receiver.

Kawasaki et al. teach a wireless microphone system having a transmitter microphone (101 of Fig. 1) and a receiver (102 of Fig. 1), where obviously antenna unit could be replaceable in view of Courtney's teaching (column 7 lines 20-29) for tuned frequency usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a receiver for reception taught by Kawasaki et al. into the wireless microphone system of AAPA, Courtney et al., and Anzai et al., in order to receive microphone transmission with tuned frequency component.

6. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA, citations refer to published specification) in view of Courtney et al. (US Patent#6469658), Anzai et al. (US Patent#5793331), and Conover (US Patent#6418377)

Regarding claim 36, AAPA, Courtney et al., and Anzai et al. teach the limitation of claim 35.

But, AAPA, Courtney et al., and Anzai et al. do not expressly disclose wherein the antenna unit comprises a visible identification, coding or color marking indicating the given frequency range. Conover teach using color coding on antenna, so that purchasers can easily find the appropriate antenna (column 4 line 66 to column 5 line 3), which would have been obvious to one of ordinary skill in the art that the color coding could be modified into usage for frequency range coding in view Courtney et al.'s teaching on replaceable antenna unit for different frequency usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate using color coding on antenna product taught by Conover into the HF transmitter of AAPA, Courtney et al., and Anzai et al., in order to provide legend for purchasers to find the appropriate antenna unit.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zhiyu Lu/  
Examiner, Art Unit 2618

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Examiner, Art Unit 2618  
February 2, 2009

/Duc Nguyen/  
Supervisory Patent Examiner, Art Unit 2618